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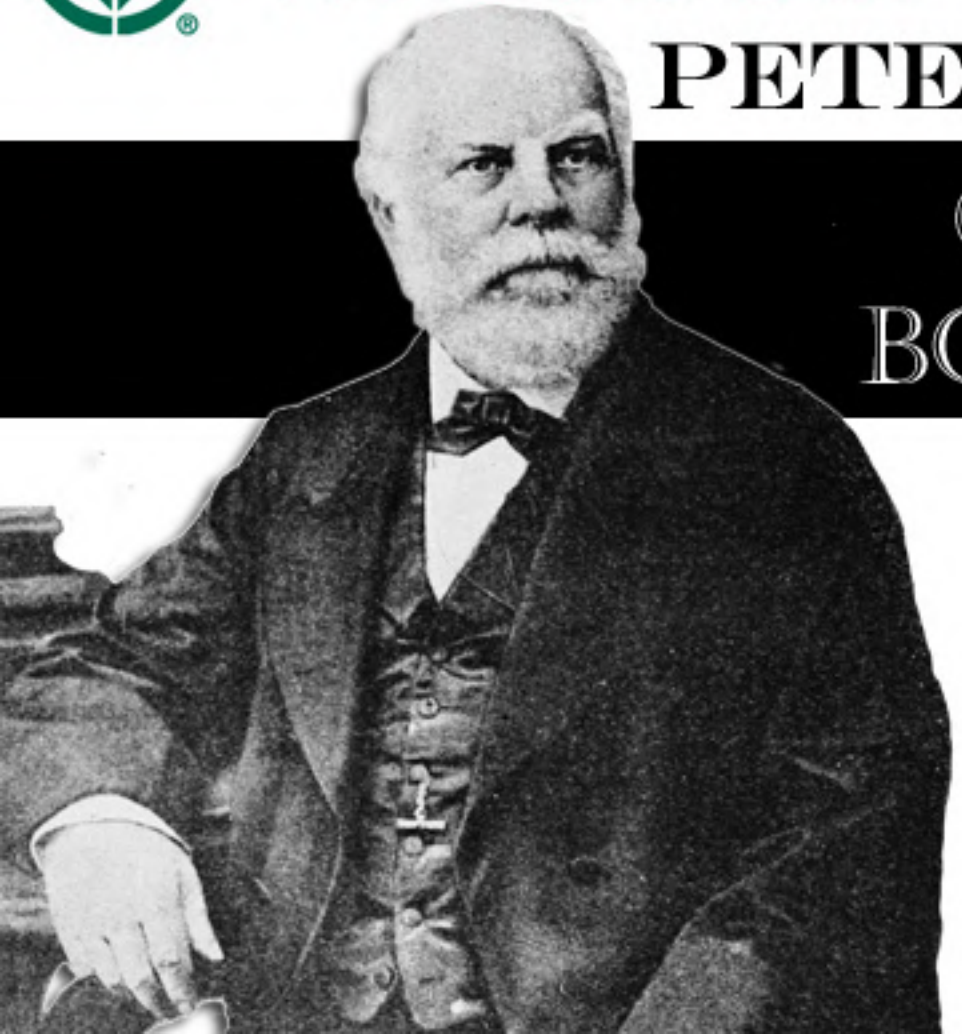

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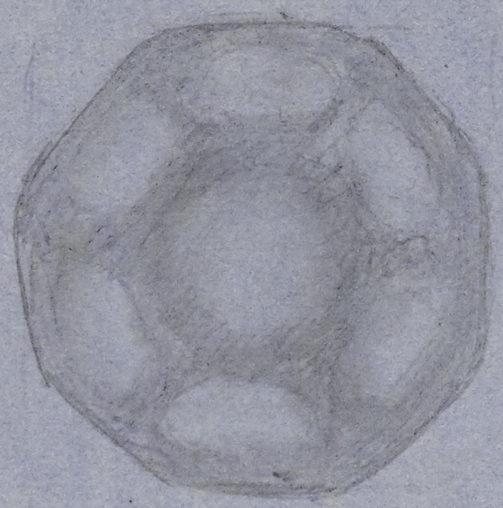
Opuntia Missouriensis $\frac{25-26}{412}$ lins $\frac{14\frac{1}{2}}{270}$

pollen 12 à faced

polygonal, very large

29 May 1868

× 270



Pollengr

stigmat 5. green, erect,

base of corolla, and stamens red.

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Office hours, from ..... 12 ..... m ..... 2 .....

Carters Rates of fees as from New York to
Kentucky & Missouri
Amer. of Nature 1820 p. 15
Ap. Conspectus Kentucky & Tennessee
Op. mission the West Kentucky to Louisiana
Atlantic Journal No 4 1832 p. 147

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Opuntia (rectispina) Rafinesquii

O. vulgaris after winter states:

Illinois (Brandstown & McClain Co) Engelm. — A. Wel

Wisconsin Lüders & Goebel

Missouri Engelm

Arkansas Engelm & Bigelow

Kentucky, sandy banks, A. Wel

not in Short's Catalogue, nor in Lapham's, nor of Lathwell's of ~~North~~ West N York

Louisiana A. Wel

The plant of Chapman Florida Catalogue and of Olney's A. I. plate is no doubt the true O. vulgaris Gray flora of Northern States: O. vulg nantucket to N Jersey & Florida

Buck says: New York to South Carolina and west to Missouri [including both species

Elliot says: probably 3 species prickly pear erect.

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Rom 1858

Opuntia monacantha?

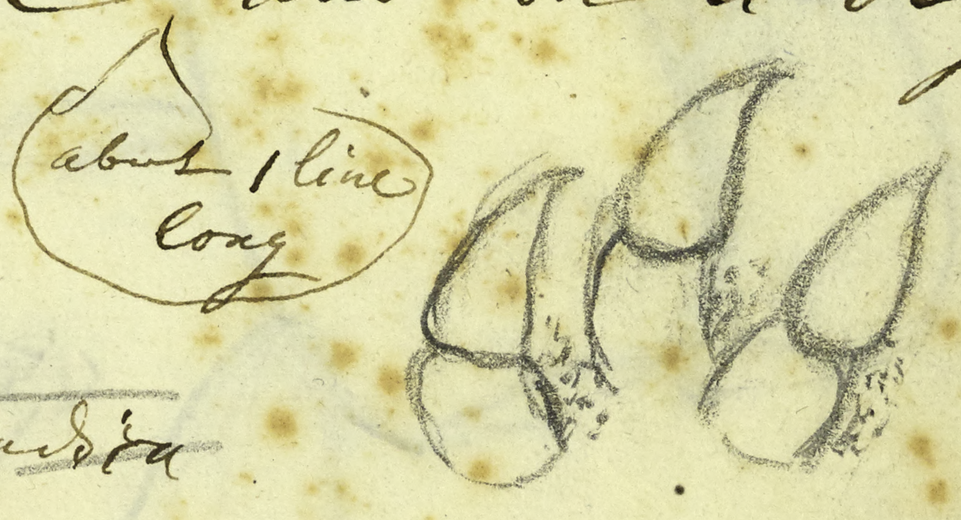
6 feet high in Jardins at Rom.
Joints very long, often 2 feet, only 4 or 5 inches wide; intensely green

Spines few 1 or 2 only, or in the old joints a few more; 1½ – 3 or even 4 inches long – 1½ – 3 inches apart

flowers said to be small (about 2 inches diameter) rotate, deep red

fruit not yet ripe (April 9th 1858) few of them with grain, mostly sterile and proliferous often repeatedly so!

Sprouts just putting out; leaves browned, very small and on a very distinct tubercle



~~flowers of Ficus indica large, yellow~~

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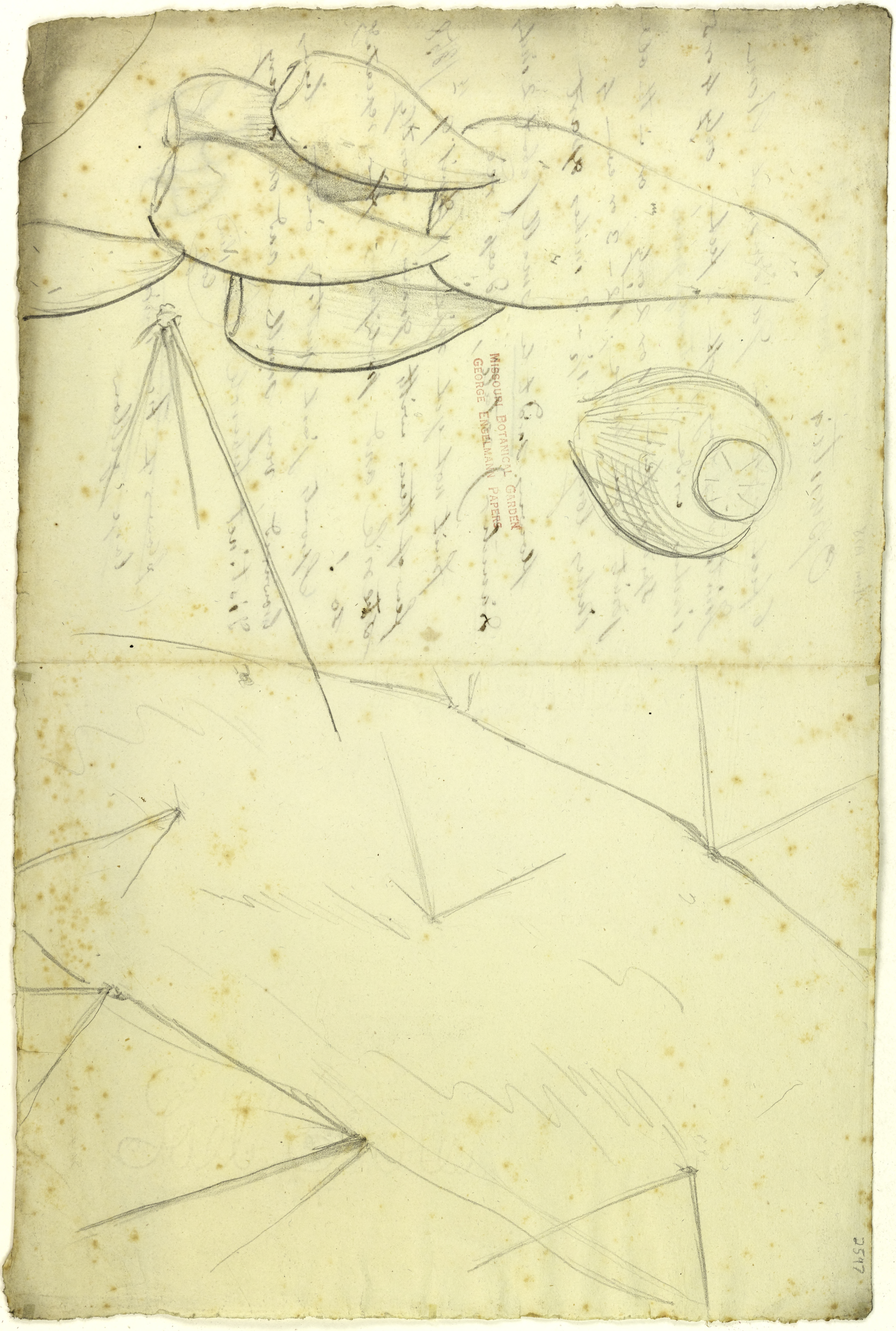

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13 Capt. Exped. Simpson 1860

Cap. Syn. Cact. p. 45.

Opuntia fragilis Haworth. Suppl. p. 82 Torr & Gr. Fl. 1. p. 555
Cactus fragilis, Nuttall Gen 1. p. 296.; First Kearny to the North Platte Country; in flower in June & July. This is, I believe, the first time that the flowers were collected since Nuttall's first discovery of the plant in 1813. Travellers report that it is very frequently seen in the Rocky Mountain parties east of the Rocky Mtns but that it is rare to find the flowers and rare still to find the fruit. Nuttall Since many years I have the plant in cultivation from specimens brought down by Dr Hayden from the Yellowstone River, but have not been able to get it to flower from it. Nuttall only says that the flowers are solitary and small. In the specimens before me they are yellow, scarcely 2 inches in diam., the ovary is 8 or 9 lines long; 13 or 15 areolae densely covered with white wool, the upper ones with a few white spines; lower sepals broadly oval with a short mucro; petals obovate, crenulate styles longer than stamens, stigmas 5 short erect, capitate.

Note. Through the kindness of Dr A. W. Chapman of Apalachicola, Fla, I have received living specimens & fruit of Op. Rio Conci so that I can now complete the description of this very distinct Southern species.

Opuntia Rio Conci LeConte (Appd to Engelm) Syn. Cact. pl. Proceed. Am. Acad. Arts & Sc. III p. 346; Chapman Fl. South. U. States p. 145: diffusa, caule ovato-oblongo articulis parvis ~~tumidis~~ ovatis seu obovatis tumidis, sepiis teretiusculis, (cuneatis) ~~tubercularibus~~ areolis ~~subdistantibus~~ pulvillis subcompactis, pulvicatis; foliis tenuissimis ovatis mucronatis incurvis; areolis junioribus albo tomentosis

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Petals very narrow pallidè ~~glaucescentibus~~ ~~inermibus~~ et plerisque alveolos singulos bacos terminante nitidos saepe basi compressos tortosve obscuros gerentibus infimis inermibus; floribus flavis ~~parvis~~ nitidis; ovario obovato ~~pubescentibus~~ ~~plerumque bacos~~ et ad marginem ~~pilis~~ per paucos ferro-villosos praedito; sepalis exterioribus ovato-lanceolatis, interioribus obovatis, suprabitis, petalis sub-5. obovatis ~~obtusis~~ spatulatis obtusis; stylo stamina aequante, stigmatibus 4-5 erectis, ~~fusca~~ ~~nubra~~ parva pulposa, seminibus paucis dimidiatis angulte obtuseque marginatis in pulpa ~~glutinosa~~ viscosa baccae parvae nebrae saepe floribus indutis coronatae aridis antibus.

Rather sandy places along the coast of Georgia and Florida. — Joints 1-3 inches long obovate, terete or narrower and cylindric, fresh or dark green usually growing one on top of the other many times with the same season, often 1-2 feet long and finally becoming separately spreading & O. fragilis prostrate; leaves 2½-3½ or even 4-8 lines long, incurved areolae 4-6 or even 8 lines distant, on the somewhat terete pulvilli; spines 1-1½ long very straight when 3 divergent like the "crowsfoot" used against Cavalry whence the name given by the military gentlemen who first noticed & distinguished them as their species. — Flowers 1½-1¾ inches in diameter; sepals & petals less numerous and less wide than in any allied species; ovary about ½ inch long, with 2 or 3 areolae only on the surface and 3 or 5 on its upper margin. — Fruit obovate, 6 or 7 lines long, rose purple with a shallow umbilicus, often crowned with the blackened remains of the flower; areolae clearly obliterated; pulp very glutinous rose, red; seeds 1-3 or at most 5 seeds, 2 lines in diameter which are very regularly shaped, with a narrow but thick and very obtuse rim. — Only apparently allied to O. fragilis by the terete, easily separating joints but widely different by its pulpy fruit, it can not be confounded with any other species.

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9) Cact. Expedit. Simpson. 1860

(vel Echinocereus)

Cereus viridiflorus Eng. in Wislizen. Mem. note 8. f. Bandy Cact. tab. 36; Synops Cact p. 22 — ~~Near Fort Laramie~~ is this; evidently the northern most Cereus; it was found in the region of Fort Laramie; it also seems to be common about Pike's Peak country. — These species (~~have~~ all with 13 ribs) are 1–3 inches high ~~and~~. show the greatest variability in the colour of the radial spines; some are always red, others white, but there is not the least system or order in the distribution of these colours; sometimes the upper and lower spines are white and the lateral red, or a few above and below, or even a single one ~~are~~ red, the others white, or the lower ones are red and the upper ones white. I mention these variations to (and all this sometimes in one & the same plant) show very little reliance ~~should be~~ can be placed on the colours or the arrangement of the colours of the spines. — ~~Central~~ spines wanting or ~~do~~ in progress horizontally, 6–9. lying long, straight or curved upward, white or (with tipped) purple. —

Cereus Engelmanni Parry in Sill Journ. n. ser. 14. p. 338. Coville in Cact. Bound. p. 36 t. 57 Synops. Cact p. 27

Opuntia Utahensis (Sphaerocarpa E&P. var?) ~~deflexibacca~~ (~~fruitu~~ ~~late~~ ovoideo) articulis obovatis ~~obtriangulatis~~ crassis (junioribus) saepius globosis-obovatis; areolis subapproximatis, folii minutis subulatis divaricatis, ~~areolis~~ nullis seu paucis; hiantibus sigillo longiore ~~alterno~~ recto roboreto albido; floribus sulphureis, ovario obovato areolis fructo autoris sub-25 instructo, sepalis exterioribus haud ovatis obovatis cuspidatis; petalis 8 late obovatis emarginatis; stylo vix supra stamina exserto, stigmatibus 8 brevibus erectis; baccis obovato carnosis areolis plurimis stipatis; seminibus numerosis irregulariter compressis, angulis marginatis. Pass, West of Steptoe valley, in the Mountains of the Basin

10. 2549

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long and almost of the same

fruit July 19 in fl. & fr. — Joints 2–3 inches in diam., ~~[illegible]~~ often over 1½ inch in thickness, sometimes almost terete or rather ellipsoid-egg-shaped; areolae 6–8 lines distant apart; leaves smaller than in any other of our species, with the exception of O. basilaris, ~~which~~ also a western species, from the Colorado, Arizona etc.; scarcely 1 line long, very slender and acute; bristles few and soon in old joints scarcely more than ½ line long; spines ~~[illegible]~~ one or a few short one or here and there a stouter one ¾–1½ inch long. — Flowers ~~about~~ nearly 3 inches in diam. pale or sulphur yellow, when fading somewhat reddish, fruit about 1 inch long, half as wide, with a very deep umbilicus, and with 20–25 areolae which sometimes show a few bristles or a minute spine. Seeds very irregular, ~~[illegible]~~ 2 or sometimes the largest nearly ½ line wide. — Though loath to increase the number of the ill defined species of this difficult genus, I can not compare this with any of the species known to me, perhaps with the exception of O. sphaerocarpa Eng. from New Mexico, of which I do not know the leaves and the flowers are unknown to me. The seed first sitting looks different but it may be variable in O. Utahensis and may finally become dry as in O. sphaerocarpa. —

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11 Cact. Exp. Simpson. 1860

Opuntia tortispina Engelm & Bigelow, Cact. Whipple p. 41 t. 8 f. 2-3 Ex. Sp. Cact. p. 37. Forks of the Platte; in fl. in July. — I can not be quite sure the specimens being very incomplete, that this is the same species as that of Capt Whipple's expedition; the joints appear somewhat smaller, the areolae closer together, and the spines shorter (1-1½ inches long) and rather weaker, still I do not know of any other species east of the Mountains to which it seems allied but this; unfortunately the fruit, which might decide, is unknown. — Leaves subulate 2 lines long ~~or longer~~ flowers 2½-3 diameter in diameter sulphur yellow, ovary elongated, 1-1½ inches long, ~~with~~ 20-30 areolae, ~~with~~ with light brown wool and bright brown bristles; extreme segments obovate, ~~complete~~ short, petals 6-8 obovate broadly obtuse, lanceolate; stigmas 6-8 short and, as long as the longer stamens.

Opuntia hystricina Engelm & Bigelow l.c. p. 44 t. 15 f. 5-7 Ex. Sp. Cact. p. 43 — The specimen collected between Walker & Carson Rivers, in flowering in June is exactly like one collected by Dr Bigelow on the Colorado Chiquito, with slenderer spines than the one figured in Capt Whipple's Report and approaching somewhat to O. erinacea E&B of the Mohave region. — Joints 5 inches long and half as wide, areolae closely set, with long ~~yellow~~ straw colored bristles; ~~upper~~ lower ones with fewer & shorter white spines, upper ones with numerous stronger ~~reddish~~ grayish spines 1½-2 inches long, lower ones pale straw colored; ~~short~~ 2½ inches or 3 in diameter; ~~20-30~~ flowers

12 2550 + Engl. & Rydb. l.c. p. 45. Eng. Syn. Cact p. 43.

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Ovary 1 inch long with 20–30 short woolly areolae; external scales oblanceolate, squamose on reversed with elongated tips; petals obovate, obtuse, crenulate; style with 8 or 10 short erect stigmas longer than the stamens. The squamose tips of the sepals are particularly conspicuous on the bud. Cotyphrox Rafinesq. Gen. 1. p. 296 Torr. & Gr. Fl. 1. p. 555 (in part)

Opuntia Missouriensis DeCand. Prod. 3. p. 472 from the deserts of the Salt Lake valley to Bear valley. Spines without flowers or pads; numerous, angular, erect, usually deflex 1½–2 inches long. Joints small (2–3 inches long) broadly obovate; areolae close together, often sub-alone. — The pads which seem to be very here is short, broad, with a flat umbilicus and very spiny.

Opuntia Missouriensis var. albispina Eng. & Bigelow l.c. p. 46 t. 14 f. 8–10. Eng. Syn. Cact p. 44 "South creek, Lookout Mountain, Western Utah," in flower in July. — ~~This for~~ appearance of the stems flexuous spines ~~the~~ seeming approach to ~~the variety~~ var. trichophora. ~~Roam~~ Flowers very bright yellow, 2–3½ inches diameter; ovary 1 inch long, with 20 or 25 areolae, scarcely spiny, external scales obovate, acuminate, petals obtuse & obtuse, crenulate; slightly ~~also~~ very short erect style shorter than the stamens. — Sep. flowers have elongated very spiny ovary, Epinephelus, evidently abortive.

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Oct 1856

Engl. = Proc. Am. Acad. III 346
Chap. = Southern Bot.

475

Opuntia Pes Corvi Le Conte seu in lit.

prostrata articulis parvis tenuiusculis, humilis diffusa foliis teretibus abrupte cuspidatis inermis ascendentibus

fruticulis magnis ovatis subapproximatis ~~maximis~~ plurimis arcuatis, plerique arcuatis, hirsutis cinereo tomentosis setis paucis hirsutis

stramineis ~~flavis~~ albicantibus, aculeis subterminis, ~~solitariis~~ deflexis divergentibus, ~~subterminis~~ 2 superioribus omnibus (interpositis) gracilibus, basi compressis, ~~saepe~~ tortis

fusciatis; flore parvo flavo, ovario obovato 5-areolato, sepalis tubi 6-8 cuspidatis, petalis 5-6 ~~rotundis~~ late obovatis emarginatis mucronatis, stigmatis 4-5 (rarius 6-8) baccae ?

Dar. Sandy fields, Georgia, Le Conte

non Apalachicola Florida Dr Chapman

— A very pretty and peculiar little species; articulations 1-1½ inch long ½ inch or even less thick almost terete areolae 1½ l. long a little less wide 4-5 (or large, with 6-8 l.) separating spines in the single Florida specimen seen but 1½ inch long very slender and somewhat compressed — Ovary 6-8 l. long; fl. 1½-1¾ inch diameter. —

× tomento cinereo brevissimo vix superantibus

Fl. 1-3, subterminis, fere aequilongis, ex unicaulibus ad monoscaulibus, gracilibus, tortis, pollicaribus, fusciis, viridibus, aculeis, ~~arcuatis~~ elongatis ad areolas inferiores, provectis ~~deflexis~~ ~~nunquam~~ deflexis, ~~nunquam~~ longioribus, crassioribus, ad superiores brevioribus ~~et mollioribus~~ se possentis (subsingulis).

Stems in the old specimen seen 1-2 ft long, 3/4-1¼ inch wide

3-5 inches high

thick, solidis tuberculatis; tuberculis ~~et pubescentibus~~

though not exactly terete; ~~stoutly~~ fasciatis; tub. or pubescentibus

purplish, hairy — the upper petals oblong, elevated areola, 2281 B
[illegible] or upper [illegible] usually in pairs, sometimes 3
or 4 together, or on weak stems single and [illegible]
1–1½ inch long.

fruit fleshy, purple, soon ~~red~~ purple, of — size of
[illegible] 2–2½ in. — shape rather regular
with a broad and very obtuse rim —
a little larger than those of O. vulgaris
Their sp. differs from

Lower VIII opposite

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May 1862

late viridis

Opuntia Pes Corvi LeConte, Mss.: Humilis, diffusa, asperadens; articulis minoribus (parvis) oblanceolatis turgidis tuberculatis fragilibus; foliis teretibus abrupte cuspidatis inermis (asperulis); areolis ovatis subconfertis breviter cinereo-tomentosis plerisque armatis; setis paucis brevis gracillimis flavidulis, pennicillatis gerentibus; aculeis 1-3 acicularibus teretiusculis porrectis seu erectis, obscuris;

flores minores ovario areolato; sepalis tubi 6-8 cuspidatis, petalis fere 5 cuneato-oblongis obtusis 1. emarginatis mucronatis; stigmatibus 4-5

bacca pulposa parva obovata late umbilicata; seminibus paucis magnisculis, subregularibus, margine obtuso cinctis;

Barren sandy places along the coast of Georgia and Florida, Chapman. — Engelm. in Bost. Am. Acad. D. p. 346.; Chapm. in Flora. South. St. p. 145. — Stems in my cultivated specimen suberect, 4-5 inches high; according to Dr Chapman, who is familiar with the plant in its native localities, and who kindly furnished me with living plants and fruits, the stems are prostrate, 1 to 2 feet long; joints 1-3 inches long and 3/4-1 1/4 wide, thick, offsets almost terete, tuberculated and very fragile, so that they readily detach themselves ~~from the~~ stem with spines adhering to some passing object, or even stem, driven by the wind, in ~~this respect greatly resembling~~ O. ~~fragilis but even more fragile~~ even more than O. fragilis. The purplish tubercles ~~or pebbles or knobs are pr~~ bear on the upper and 4-5 or 4th large joints 6-8 lines apart an oblong prominent areola. F See next page spines on the upper areolae usually in pairs, sometimes 2-3 or three, of a dusky color, on the lower ones or in weak specimens single and paler and shorter

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F see last page

~~Flowers~~ Leaves 2½ - 3½ or even 4 lines long, thick, abruptly and sparingly - shaped ~~pinnatifid~~ obtuse, obtuly & Ref cuspidate, incurved (spines generally developed in their axils before they fall off). Bristles at first very small in old stems ~~more pronounced~~, more elongated forming a compact pointed ~~point like~~ bundle.

Flowers (I have seen only dried specimens from Florida) 1½ - 1¾ inches in diameter, pale yellow; ovary 6 - 7 lines long, obovate, generally with only 2 areolae near the middle and 5 on or near the upper edge,

Fruit as long as ovary, obovate, with a comparatively broad or deep umbilicus, often crowned with the blackened remains of the flower; of rose purple ~~H~~ colour, and ~~of~~ appearance with the same areolae as the ovary; containing in its small cavity a few seeds (1 - according to Chapman C. r. 3 - 5 in the specimens examined by him) surrounded by an insipid glutinous pulp. Seeds 2¼ - 2½ lines in diameter rather regular in shape, with a broad and very obtuse rim.

This species decidedly differing from the allied O. vulgaris and Rafinesquii and is well characterized by its elongated, tubercular ~~spines~~ thick and pointed, not to speak of the species, by its small flowers and fruit. ~~with~~ According to Dr Chapman it occupies in Florida similar localities with the former, but is abundantly distinguished.

June 1864 Flowering with me for the first time, and abundantly!

Ovary small, obconic, 9 lines long, 3½ in diameter above. 5 sepals on ovary, 5 on its margin, 7 - 8 upper sepals, 7 - 8 petals obcordate (crest fili for pale yellow stigmata of 1½ lines long) pale yellow stamens with yellow anthers; 4 (3 - 5) style shorter than stamens 1 - 1¼ line of lower part of tube naked, - 2 lines of tube, above this, staminate.

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